

AMENDMENTS

In the Specification:

On page 20, beginning at line 1, please replace the paragraph with the following:

FIGS. 20A-20B illustrate[[s]] an enhanced means of energy delivery to tissue from an expandable flex structure **524** similar to that depicted in FIGS. 15 and 19. The expandable structure **524** in FIG. 20A carries an additional conductive surface (electrode) layer indicated at **565** about the surface of the structure proximate the inflow ports **522**. It should be appreciated that the conductive surface **565** can be provided in any working surface (or interior of any working surface) in the various embodiments described above. The conductive surface **565** is coupled to an electrical source and a controller, but is adapted to function independently from, or in cooperation with, the electrical discharges that convert the liquid media to vapor media. Electrical energy delivery to surface electrode **565** can be intermittent a high Hz rate of energy delivery to the vaporizing electrodes **515A** and **515B**, or out of phase, for example. FIG. 20B is a schematic view of the method of the invention, showing a small portion of expandable structure **524** and channel **525** pressed against tissue. Vapor media **M'** is ejected under high pressure from ports **522** deep into tissue as depicted above in FIG. 19. The media is a high saline content solution that is vaporized in the instrument working end as described above and injected under high pressure into soft tissue **T**. It has been found that such vapor injection migrates in extracellular ~~intracellular~~ spaces between cells **566**. The vapor media **M'** is also conductive (as it consists of a transient ionized plasma) as it extends very deep into soft tissue under the high pressure propagation before it condenses and delivers energy to tissue in the phase change release. At the time that the vapor media **M'** is with within the intracellular spaces **570**, it can serve as a gas electrode (or evanescent electrode) that can conduct high voltage in cooperation with a ground pad until the vapor plume collapses. The method of the invention thus comprises applying voltage to the gas electrode (from conductive surface **565**) within the extracellular ~~intracellular~~ spaces or deep tissue spaces to apply ablative energy to the tissue **T**. Thus, the phase transition energy release can be enhanced by energy delivery via the evanescent electrode

means. This form of enhanced energy delivery will be uniform about the surface of the—in effect—gas electrode that evanesces (vanishes) leaving only dispersed water droplets. By these means, thermal ablation or shrinkage of vessel lumens or soft tissues can be accomplished very rapidly, under ultrasound visualization. In soft tissue applications, it has been found that the vapor media can be introduced deep into tissue volumes through extracellular ~~intracellular~~ fluid spaces to apply high energy densities throughout the targeted tissue volume. In effect, the evanescent electrode for micro-second or longer time scale extends throughout the tissue—not just contacting the tissue surface as is mono-polar or bi-polar Rf. While the method of applying electrical energy to the conductive plasma or vapor is shown in soft tissue in FIG. 20B, the method applies equally to use in body lumens as in the treatment of varicose veins as in FIG. 11.